

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A data processing apparatus for transferring transmitting a document formed by a plurality of logical pages to a printing device, and allowing the printing device to perform a printing process in set units, comprising:

spooling means for spooling the ~~document~~ plurality of logical pages for each of a plurality of sets;

designation means for designating a printing mode for output of a plurality of logical pages to one ~~storage medium~~ print sheet;

~~collate determination means for determining whether or not the document is a collate document to be printed in plural set units by comparing drawing information retrieval means for retrieving, from~~ among the plurality of logical pages of the document spooled in said spooling means, one logical page identical in drawing information to a first logical page when said designation means designates the printing mode;

determination means for determining drawing information from the first logical page to a logical page just previous to the one logical page retrieved by said retrieval means to be drawing information for one of the plurality of sets;

generation means for generating a print command to be transmitted to the printing device based on the drawing information for the one set determined by said determination means; and

transmission means for transmitting the print command generated by said generation means to the printing device

detection means for comparing drawing information among logical pages in the spooled document when said collate determination means determines that the document is a collate document; and detecting the number of pages as a segment of a set unit; and

control means for controlling a set-unit transfer process on drawing information for the printing device depending on the segment of a set unit detected by said detection means.

2. (Currently Amended) The data processing apparatus according to claim 1,

wherein [[a]] the printing mode ~~which can be specified~~ designated by said designation means includes a double-sided printing mode for printing drawing information on both sides of ~~a storage medium~~ one print sheet, and a N-up printing mode for outputting a plurality of logical pages on ~~the storage medium~~ one print sheet.

3. (Currently Amended) The data processing apparatus according to claim 1,

wherein when said collate document determination means determines whether or not the current document is a collate-formatted document, the size of data on each page stored by said spooling means is compared, and it is determined whether or not contents are different said retrieval means retrieves the one logical page based on data sizes of the one logical page and the first logical page.

4. (Currently Amended) The data processing apparatus according to claim 1,

wherein when said collate document determination means determines whether or not the current document is a collate-formatted document, a spool code of each page is sampled and compared, thereby determining a page containing different contents said retrieval means retrieves the one logical page by performing a sampling process on the one logical page and the first logical page.

5. (Currently Amended) The data processing apparatus according to claim 1,

wherein when said collate document determination means determines whether or not the current document is a collate-formatted document, all data in a spool code of each page is compared as a method of determining pages completely matching in contents, thereby determining matching pages in contents said retrieval means retrieves the one logical page by comparing all spool codes for the first logical page with all spool codes for the remaining logical pages.

6. (Currently Amended) The data processing apparatus according to claim 1,

wherein when a printing device can perform collate-printing, there is no means for spooling a print command, and it is necessary to transmit a collate set number designation print command at the beginning of a job, all pages in the job are temporarily spooled and then said collate document determination means makes a determination, when

said print command generation means generates a collate set number designation print command and a part of leading print commands, said collate document determination means obtains a factor (including 1) of a total number of pages forming a document, segments a document for each factor, and determines drawing contents whether or not a collate-format page configuration is established if the printing device cannot store the print command for the plurality of logical pages for each set, said generation means generates a print command indicating the number of the sets and a print command for printing the drawing information for the one set determined by said determination means.

7. (Currently Amended) The data processing apparatus according to claim 1,

wherein a printing device includes spooling means of a print command, when it is not necessary to transmit a collate set number designation print command to the beginning of the job, said spooling means stores drawing information for each means, said collate document determination means determines immediately after storing a page other than the first page whether or not it contains the same contents as the first page, a print command of the page is generated and transferred to the printing device until the page including the same drawing contents as the first page can be detected, when a page including the same drawing contents as the first page is detected, said collate document determination means determines whether or not the current document is a collate document all through the job in and after the page, if it is a collate document, a collate set number designation print command is generated, and collate-printing is performed on a printing device if the printing device can store the print command for the plurality of logical pages

for each set, said spooling means stores drawing information for each logical page, and  
said transmission means transmits the print command generated by said generation means  
until said retrieval means retrieves the one logical page to the printing device, and  
thereafter if the document is determined to be a collate document based on the logical  
pages subsequent to the retrieved one logical page, said transmission means transmits a  
print command indicating the number of the sets.

8. to 18. (Cancelled)

19. (Currently Amendment) A job processing method for use with a data processing apparatus which ~~transfers~~ transmits to a printing device a document formed by a plurality of logical pages to allow the printing device to perform a printing process in set units, including:

a spooling step of spooling the ~~document~~ plurality of logical pages for each of a plurality of sets;

a designating step of designating a printing mode for output of a plurality of logical pages to one storage medium print sheet;

a ~~collate determining step of determining whether or not the document is a collate document to be printed in plural set units by comparing drawing information~~  
retrieving step of retrieving, from among the plurality of logical pages of the document  
spooled in said spooling step means, one logical page identical in drawing information to a  
first logical page when said designation means designates the printing mode is designated  
in said designating step;

a determining step of determining drawing information from the first logical page to a logical page just previous to the one logical page retrieved in said retrieving step to be drawing information for one of the plurality of sets;

a generating step of generating a print command to be transmitted to the printing device based on the drawing information for the one set determined in said determining step; and

a transmitting step of transmitting the print command generated in said generating step to the printing device

a detecting step of comparing drawing information among logical pages in the spooled document when said collate determination means determines that the document is a collate document, and detecting the number of pages as a segment of a set unit; and

a controlling step of controlling a set-unit transfer process on drawing information for the printing device depending on the segment of a set unit detected by said detection means.

20. (Currently Amended) A data processing program stored on a computer-readable storage medium, the program being executed by a data processing apparatus which ~~transfers~~ transmits to a printing device a document formed by a plurality of logical pages to allow the printing device to perform a printing process in set units, including:

a spooling step of spooling the ~~document~~ plurality of logical pages for each of a plurality of sets;

a designating step of designating a printing mode for output of a plurality of logical pages to one storage medium print sheet;

a collate determining step of determining whether or not the document is a collate document to be printed in plural set units by comparing drawing information retrieving step of retrieving, from among the plurality of logical pages of the document spooled in said spooling step means, one logical page identical in drawing information to a first logical page when said designation means designates the printing mode is designated in said designating step;

a determining step of determining drawing information from the first logical page to a logical page just previous to the one logical page retrieved in said retrieving step to be drawing information for one of the plurality of sets;

a generating step of generating a print command to be transmitted to the printing device based on the drawing information for the one set determined in said determining step; and

a transmitting step of transmitting the print command generated in said generating step to the printing device

a detecting step of comparing drawing information among logical pages in the spooled document when said collate determination means determines that the document is a collate document, and detecting the number of pages as a segment of a set unit; and

a controlling step of controlling a set-unit transfer process on drawing information for the printing device depending on the segment of a set unit detected by said detection means.